



POR SF  
11.3.125.1u  
04/30/90

IN DATA 64

Flammability Rating

Health Rating

Reactivity Rating

HAZARD RATING

Please rate consistent with NFPA Code

## MATERIAL SAFETY DATA SHEET

### SECTION I NAME AND PRODUCT

|  |   |
|--|---|
| MANUFACTURER'S NAME<br><b>NORTON COMPANY</b>   | CONTACT<br><b>THOMAS Z. RICHARDS</b>                    |
| ADDRESS (STREET, CITY, STATE AND ZIP CODE)<br><b>1 NEW BOND STREET, WORCESTER, MA 01615-0008</b> | EMERGENCY TELEPHONE NO.<br><b>508-795-2690</b>          |
| TRADE NAME, COMMON NAME OR SPECIFICATION<br><b>RESINOID BONDED GRINDING WHEELS</b>               | APPROVED BY<br><i>Kemerayana</i><br>DATE <b>4/30/90</b> |
| CHEMICAL FAMILY OR PRODUCT TYPE<br><b>ANY GRADE</b>  |   |

### SECTION II COMPOSITION PER 29CFR 1910.1200 (G) (4)

| CHEMICAL NAME   | MAX % | COMMON NAME         | REG* (Y/N) | CAS #      | OSHA PERMISSIVE EXPOSURE LIMIT    | ACGIH TLV                         | CARCINOGEN (Y/N) |
|---|-------|---------------------|------------|------------|-----------------------------------|-----------------------------------|------------------|
| Alpha-Alumina   | 90    | Alundum, Seeded Gel | Y          | 1344-28-1  | 10mg/m <sup>3</sup> (Total Dust)  | 10mg/m <sup>3</sup> (Total Dust)  | N                |
| Silicon Carbide   | 90    | Crystolon           | Y          | 409-21-2   | 10mg/m <sup>3</sup> (Total Dust)  | 10mg/m <sup>3</sup> (Total Dust)  | N                |
| Zirconia Alumina  | 90    | NZ, ZF, ZS          | Y          | **NAIF     | 5mg/m <sup>3</sup> (as Zirconium) | 5mg/m <sup>3</sup> (as Zirconium) | N                |
| The grinding wheel may be comprised of 1 or more of the above abrasives. The chemicals listed below may be a part of the bond system.                           |       |                     |            |            |                                   |                                   |                  |
| Fluorides (as F)  | 3     | ***N/A              | Y          | ***N/A     | 2.5mg/m <sup>3</sup>              | 2.5mg/m <sup>3</sup>              | N                |
| Calcium Oxide   | 3     | Lime                | Y          | 1305-78-8  | 5mg/m <sup>3</sup>                | 2mg/m <sup>3</sup>                | N                |
| Glass, Fibrous or Dust  | 10    | Fiberglass          | Y          | **NAIF     | **NAIF                            | 10mg/m <sup>3</sup>               | N                |
| <sup>137</sup> Silicon Dioxide  | <1    | Crystalline Silica  | Y          | 14808-60-7 | 0.1mg/m <sup>3</sup>              | 0.1mg/m <sup>3</sup>              | Y                |
| *Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Know Regulations. |       |                     |            |            |                                   |                                   |                  |

<sup>(1)</sup> Actual grinding tests with wheels known to contain Crystalline Silica did not produce any detectable amount of respirable free Silica.

### SECTION III PHYSICAL AND CHEMICAL DATA

|                                    |   |                              |
|------------------------------------|---|------------------------------|
| BOILING POINT **NAIF               | MELTING POINT **NAIF  | SPECIFIC GRAVITY 2-4 ...     |
| VAPOR PRESSURE **NAIF              | PERCENT VOLATILE BY VOL **NAIF                                  | VAPOR DENSITY **NAIF         |
| EVAPORATION RATE **NAIF            | SOLUBILITY IN WATER Slight                                      | SOLUBILITY IN ALCOHOL **NAIF |
| SOLUBILITY IN OTHER SOLVENT **NAIF | APPEARANCE AND ODOR<br>SOLID PRODUCT: MAY GIVE OFF ODOR IN USE. |                              |

### SECTION IV SPECIAL PRECAUTIONS

|   |                                       |
|---|---------------------------------------|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE - NONE. | <b>USEPA SF</b><br><br><b>1265530</b> |
| OTHER PRECAUTIONS:<br><b>**NAIF</b>                     |                                       |

### SECTION V CORROSIVITY AND REACTIVITY DATA

|   |  |
|---|--|
| STABILITY <input type="checkbox"/> UNSTABLE <input checked="" type="checkbox"/> STABLE  | POLYMERIZATION <input type="checkbox"/> MAY OCCUR <input checked="" type="checkbox"/> WILL NOT OCCUR |
| COMPATIBILITY (MATERIALS TO AVOID)  |  |
| DECOMPOSITION PRODUCTS<br>In use, dust and decomposing odors are generated. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products. |  |
| CONDITIONS TO BE AVOIDED<br><b>**NAIF</b>   |  |

\*\*NAIF - NO APPLICABLE INFORMATION FOUND

\*\*\*N/A - NOT APPLICABLE

**SECTION VI HEALTH, FIRST AID AND MEDICAL DATA**

| PRIMARY ROUTE(S)<br>OF ENTRY                         | ACUTE AND CHRONIC HEALTH EFFECTS<br>AND EFFECTS OF OVEREXPOSURE   | FIRST AID AND<br>MEDICAL INFORMATION   |
|--|---|--|
| INHALATION<br>(During Grinding)                      | ACUTE: COUGHING, SHORTNESS OF BREATH.<br>CHRONIC: MAY AFFECT BREATHING CAPACITY.  | REMOVE TO FRESH AIR.<br>ARTIFICIAL RESPIRATION AS NEEDED.<br>OBTAIN MEDICAL ASSISTANCE.                |
| INGESTION<br>(During Grinding)                       | NO KNOWN ADVERSE EFFECTS, BUT<br>INGESTION NOT RECOMMENDED.   | OBTAIN MEDICAL ASSISTANCE.   |
| SKIN (During Grinding)      CONTACT &<br>ABSORPTION  | SOME MAY EXPERIENCE SKIN IRRITATION FROM<br>DUST.   | WASH AFFECTED AREAS WITH SOAP AND<br>WATER. OBTAIN MEDICAL ASSISTANCE.                                 |
| EYE<br>(During Grinding)                             | DUSTS MAY IRRITATE EYES.  | WASH WITH LARGE AMOUNTS OF WATER.<br>OBTAIN FIRST AID AND MEDICAL ASSIS-<br>TANCE, IF NEEDED.          |
| OTHER POTENTIAL<br>HEALTH RISKS<br>(During Grinding) | GRINDING MAY CREATE ELEVATED SOUND<br>LEVELS WHICH MAY AFFECT HEARING AND MAY<br>AGGRAVATE PREEXISTING RESPIRATORY CON-<br>DITIONS. | OBTAIN MEDICAL ASSISTANCE.<br>THERE IS LIMITED INFORMATION THAT<br>CRYSTALLINE SILICA IS A CARCINOGEN. |

**SECTION VII STORAGE, HANDLING AND USE PROCEDURES**

|  |
|--|
| NORMAL STORAGE AND HANDLING<br>SEE ANSI STANDARD B7.1.   |
| NORMAL USE<br>HANDLE WITH ADEQUATE VENTILATION. SEE OSHA 29CFR 1910.94 (VENTILATION) and 29CFR1910.1000 (AIR CON-<br>TAMINANTS)  |
| STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS.<br>NORMAL CLEANUP PROCEDURES.  |
| WASTE DISPOSAL METHOD<br>STANDARD LANDFILL METHODS CONSISTENT WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS.<br>PRODUCTS WITH LISTED FLOURIDES MAY HAVE SLIGHTLY SOLUBLE FLOURIDE SWARF. |

**SECTION VIII PERSONAL PROTECTION INFORMATION**

|   |                         |  |
|---|-------------------------|--|
| RESPIRATORY PROTECTION (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUST RESPIRATORS SEE OSHA 29CFR 1910.134.                   |                         |  |
| VENTILATION   | LOCAL                   | RECOMMENDED  |
|   | MECHANICAL<br>(GENERAL) | RECOMMENDED  |
|   | OTHER                   | **NAIF   |
|   |                         |  |
| PROTECTIVE GLOVES   |                         | AS DESIRED BY USER   |
| EYE PROTECTION  |                         | RECOMMENDED SEE OSHA 29CFR 1910.133                                      |
| OTHER EQUIPMENT   |                         | AS NEEDED HEARING PROTECTION SEE OSHA 29CFR 1910.95 (HEARING PROTECTION) |
| MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL. |                         |  |
| SEE SECTION VII & VIII  |                         |  |

**SECTION IX FIRE AND EXPLOSION HAZARD DATA**

|                                  |           |             |        |                  |         |            |
|----------------------------------|-----------|-------------|--------|------------------|---------|------------|
| FLASH POINT                      | **NAIF    | METHOD USED | ***N/A | FLAMMABLE LIMITS | LEL N/A | UEL ***N/A |
| EXTINGUISHING MEDIA              | USE WATER |             |        |                  |         |            |
| SPECIAL FIRE FIGHTING PROCEDURES | NONE      |             |        |                  |         |            |
| EXPLOSION POTENTIAL              | **NAIF    |             |        |                  |         |            |

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